

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Fourcade

§ Atty. Dkt. No.: F-876

Serial No.: 10/564,109

§ Group Art Unit: 1796

Confirmation No.: 7205

§ Cust. No.: 25264

Filed: August 21, 2006

§ Examiner: Lenihan

For: Peelable Polyethylene Films

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Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Honorable Commissioner:

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37 CFR 1.16

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9/24/2010
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APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 1796 dated April 26, 2010, finally rejecting claims 8-15, 17-21 and 23-28.

Real Party in Interest

The present application has been assigned to TOTAL Petrochemicals Research Fehuy, Zone Industrielle C, Seneffe, Belgium B7181.

Related Appeals and Interferences

Appellants assert that no other appeals, interferences or judicial proceedings are known to the Appellants, the Appellants' legal representative or Assignee that will

directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-7 were originally presented in the application. Claims 1-7 were cancelled and claims 8-27 were added in a Preliminary Amendment. Claims 16 and 22 were cancelled in Response to the Office Action dated September 2, 2008. Claim 28 was added in Response to the Office Action dated November 6, 2009. Accordingly, claims 8-15, 17-21 and 23-28 are pending and stand rejected under 35 U.S.C. §103(a). The rejection of the pending claims is appealed. The pending claims are shown in the attached Appendix A.

Status of Amendments

No amendments have been made to the pending claims in response to the Final Office Action.

Summary of Claimed Subject Matter

Independent claim 8 recites a composition of matter comprising a homogenous blend of from 10-90 wt. % of a metallocene catalyzed ethylene polymer and from 10-90 wt. % of a styrene-butadiene block copolymer having from 5-40 wt. % of 1,3-butadiene monomer units and from 60-95 wt. % styrene monomer units, wherein the metallocene catalyzed ethylene polymer or the styrene-butadiene block copolymer are present in the composition in an amount of at least 50 wt.%, wherein the composition is formed in the configuration of a peelable film. See, Specification, at least page 3, lines 10-25.

Independent claim 26 recites a process for producing a peelable film comprising preparing a homogeneous blend containing from 10-90 wt. % of a metallocene catalyzed ethylene polymer and from 10-90 wt. % of a styrene-butadiene block copolymer having from 5-40 wt. % of 1,3-butadiene monomer units and from 60-95 wt. % styrene monomer units, wherein either the metallocene catalyzed ethylene polymer or the styrene-butadiene block copolymer are present in the blend in an amount of greater than 50 wt.%, and

conforming said blend in the configuration of a peelable film. *See*. Specification, at least page 3, lines 10-28.

Grounds of Rejection to be Reviewed on Appeal

1. The rejection of claims 8-15, 17-21 and 24-27 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,302,554 (*Nabeta*) in view of EP 1312624 (*Marechal*).
2. The rejection of claims 8-11, 13-14, 17-18 and 23-27 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,022,612 (*Wilkie*) in view of K RESIN® DK11 Product Data Sheet (*Data Sheet*).
3. The rejection of claims 13 and 15 under 35 U.S.C. §103(a) as being unpatentable over *Wilkie* in view of *Data Sheet* and *Marechal*.
4. The rejection of claims 8-15, 17-19, 24-25 and 28 under 35 U.S.C. §103(a) as being unpatentable over WO 01/15897 (*Ishii*) in view of *Marechal*.

Arguments

1. THE EXAMINER ERRED IN REJECTING CLAIMS 8-15, 17-21 AND 24-27 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER *NABETA* IN VIEW OF *MARECHAL*.

Nabeta teaches a film including an elastomeric block copolymer and an olefinic polymer. *See*, Abstract. The Examiner acknowledges that *Nabeta* fails to disclose metallocene catalysts (however, stating that “*Nabeta* does not specifically recite the use”), but asserts that it would have been obvious to modify Example 16 of *Nabeta* with a metallocene catalyst polyolefin. *See*, Office Action dated February 17, 2009 at number 13. Appellants respectfully submit that motivation to utilize the metallocene catalyzed polyethylene of *Marechal* rather than the Ziegler-Natta catalyzed polymer of *Nabeta* is absent.

While the Supreme Court of the United States has recently rejected a formalistic and rigid application of the teaching, suggestion, or motivation test as an exclusive test in the obviousness inquiry, it nevertheless made clear that an invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements

was, independently, known in the prior art". *See*, KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007). The Supreme Court elucidated on this matter by stating that "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine elements in the way the claimed new invention does". *See, Id.*

Appellants respectfully submit that the skilled person reviewing *Marechal* would not have been led to believe that a metallocene catalyzed polyethylene would provide improved peelability in film and therefore would have no motivation to use such in the *Nabeta* process. The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Furthermore, Appellants respectfully submit that even if the catalyst of *Marechal* were combined with the teachings of *Nabeta*, the claimed features (a homogenous blend of a metallocene catalyzed ethylene polymer and a styrene-butadiene block copolymer) provide significant and unexpected improvements in peelable films. Specifically, the use of metallocene catalyzed polyethylene, utilized in combination with the claimed block copolymer, provides unexpectedly improved peelability over other types of catalyzed polyethylene (*see*, examples showing that the adhesion of the film F1 whose seal layer was made with the blend according to the invention could be improved by increasing the sealing temperature at 175°C whereas at this temperature, the comparative films melted and broke). Accordingly, Appellants respectfully request reversal of the rejection.

II. THE EXAMINER ERRED IN REJECTING CLAIMS 8-11, 13-14, 17-18 AND 23-27 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER *WILKIE* IN VIEW OF *DATA SHEET*.

Wilkie teaches films having a surface layer formed of a blend of polyolefin and thermoplastic rubber having a matte-finish surface. *See*, Abstract. The Examiner acknowledges that "Wilkie does not teach the use of a styrene/butadiene/styrene block copolymer wherein the amounts of styrene and butadiene fall within the claimed ranges". *See*, Office Action dated February 17, 2009 at number 16. However, the Examiner

asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition disclosed by Wilkie by substituting the commercially available K Resin...for the thermoplastic rubber component of Wilkie". See, *Id.* at number 18. Appellants respectfully disagree.

To establish a *prima facie* case, the PTO must satisfy three requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. See, *Karsten Mfg. Corp. v. Cleveland Gulf Co.*, 242 F.3d 1376, 1385, 58 U.S.P.Q.2d 1286, 1293 (Fed. Cir. 2001). As demonstrated by the Product Data Sheet, K RESIN® exhibits high surface gloss. However, *Wilkie* is directed towards providing a matte-finish surface. Furthermore, *Wilkie* teaches cold sealing (see, column 4, lines 18-22) rather than the heat sealing taught by K RESIN®. Accordingly, Appellants respectfully submit that there would have been no motivation to modify the teachings of *Wilkie* with the K RESIN®.

Furthermore, it is well established that if a proposal for modifying the prior art in an effort to attain the claimed invention causes the art to become inoperable or destroys its intended function, then the requisite motivation to make the modification would not have existed. See, *In re Fritch*, 972 F.2d 1260, 1265, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992), *In re Ratti*, 270 F.2d 810, 813, 123 U.S.P.Q. 349, 352 (C.C.P.A. 1959) (holding the suggested combination of references improper because it "would require a substantial reconstruction and redesign of the elements shown in [a prior art reference] as well as a change in the basic principles under which [that reference's] construction was designed to operate"). Appellants respectfully submit that modifying the teachings of *Wilkie* with the K RESIN® would destroy the intended function to provide a matte finish in *Wilkie*.

Furthermore, even if combined, the combination of such references, read in light of their entirety would not lead one skilled in the art to utilize the claimed blend as the only metallocene catalyzed polymers utilized in *Wilkie* are copolymers of ethylene with other plastomers. See, column 5, lines 8-19. Accordingly, Appellants respectfully request reversal of the rejection.

III. THE EXAMINER ERRED IN REJECTING CLAIMS 8-11, 13-14, 17-18 AND 23-27 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER WILKIE IN VIEW OF DATA SHEET AND MARECHAL.

The Examiner set forth the same arguments for the §III rejection as the §II rejection. Appellants distinguished *Wilkie* in view of *Data Sheet* from the pending claims in the above discussion and feel that repeating such arguments is unnecessary. Based on such previously presented arguments, Appellants respectfully request reversal of the rejection.

IV. THE EXAMINER ERRED IN REJECTING CLAIMS 8-15, 17-19, 24-25 AND 28 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER ISHII IN VIEW OF MARECHAL.

Ishii teaches films including a sealant layer formed of 50 to 100 wt.% of a component having from 5 to 50 wt.% of a block copolymer, from 5-50 wt.% of an ethylene/olefin random copolymer and from 5-70 wt.% of a block copolymer. See, Abstract. *Ishii* does not teach, show or suggest the composition having the components in the amounts as claimed. However, the Examiner asserts that “it would have been obvious...to modify the composition of Example 4 to comprise 50% by weight...of component (a) rather than 45%”. See, Office Action dated September 2, 2008 at number 11.

The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, 903, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). Appellants respectfully submit that no such suggestion is identified by the Examiner.

Furthermore, the Examiner acknowledges that *Ishii* fails to disclose metallocene catalysts (however, stating that “*Ishii* does not specify the use”), but asserts that it would have been obvious to modify the composition of *Ishii* with a metallocene catalyst polyolefin. See, Office Action dated September 2, 2008 at number 15. Appellants respectfully submit that a motivation to utilize the metallocene catalyzed polyethylene of *Marechal* rather than the Ziegler-Natta catalyzed polymer of *Ishii* is absent.

While the Supreme Court of the United States has recently rejected a formalistic and rigid application of the teaching, suggestion, or motivation test as an exclusive test in

the obviousness inquiry, it nevertheless made clear that an invention "composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art". See, KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007). The Supreme Court elucidated on this matter by stating that "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine elements in the way the claimed new invention does". See, *Id.*

Appellants respectfully submit that the skilled person reviewing *Marechal* would not have been led to believe that a metallocene catalyzed polyethylene would provide improved peelability in film and therefore would have no motivation to use such in the *Ishii* process. The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Furthermore, Appellants respectfully submit that even if the catalyst of *Marechal* were combined with the teachings of *Ishii*, the claimed features (a homogenous blend of a metallocene catalyzed ethylene polymer and a styrene-butadiene block copolymer) provide significant and unexpected improvements in peelable films. Specifically, the use of metallocene catalyzed polyethylene, utilized in combination with the claimed block copolymer, provides unexpectedly improved peelability over other types of catalyzed polyethylene (see, examples showing that the adhesion of the film F1 whose seal layer was made with the blend according to the invention could be improved by increasing the sealing temperature at 175°C whereas at this temperature, the comparative films melted and broke). Accordingly, Appellants respectfully request reversal of the rejection.

Conclusion

In conclusion, the references of record, either alone or in combination fail to teach, show or suggest the features of the pending claims. Thus, Appellants respectfully request reversal of the rejections of claims 8-15, 17-21 and 23-28.

Respectfully submitted,

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Appendix A
Pending Claims

8. A composition of matter comprising a homogenous blend of from 10-90 wt. % of a metallocene catalyzed ethylene polymer and from 10-90 wt. % of a styrene-butadiene block copolymer having from 5-40 wt. % of 1,3-butadiene monomer units and from 60-95 wt. % styrene monomer units, wherein the metallocene catalyzed ethylene polymer or the styrene-butadiene block copolymer are present in the composition in an amount of at least 50 wt.%, wherein the composition is formed in the configuration of a peelable film.
9. The composition of claim 8 wherein said composition contains at least 40 wt. % of said styrene-butadiene block copolymer.
10. The composition of claim 9 wherein said composition contains at least 40 wt. % of said metallocene catalyzed ethylene polymer.
11. The composition of claim 8 wherein said metallocene catalyzed ethylene polymer is a copolymer of ethylene with a comonomer selected from the group consisting of propylene, 1-butene, 1-hexene, -1-octene and 4-methyl-1-pentene.
12. The composition of claim 11 wherein said comonomer is 1-hexene.
13. The composition of claim 8 wherein said styrene-butadiene block copolymer comprises 1,3-butadiene monomer units in an amount within the range of 15-30 wt. % and styrene monomer units in an amount within the range of 70-85 wt. %.
14. A homogenous blend according to claim 13 wherein the styrene-butadiene block copolymers have a transmittance of 91% and a haze of 3% when both are measured according to ASTM D 1003.
15. The composition of claim 8 wherein said metallocene catalyzed ethylene polymer

is produced by the polymerization of ethylene in the presence of a catalyst system comprising a bridged metallocene catalyst component.

17. The composition of claim 8, wherein the composition is adapted for the packaging of a food product to provide a closure for a container.

18. The composition of claim 17 wherein said film is sufficiently transparent to permit a viewing of a food product disposed within said container.

19. The composition of claim 17 wherein said container is made of polystyrene.

20. The composition of claim 19 wherein said film contains greater than 50 wt.% of said styrene-butadiene block copolymer.

21. The composition of claim 17 wherein said container is formed of polypropylene.

23. The composition of claim 21 wherein said film contains said metallocene catalyzed ethylene polymer in an amount of greater than 50 wt. %.

24. The composition of claim 18 wherein the styrene-butadiene block copolymer has a transmittance of 91% and a haze of 3% when both are measured according to ASTM D 1003.

25. The composition of claim 24 wherein said styrene-butadiene copolymer has a haze of no more than 2% when measured according to ASTM D 1003.

26. A process for producing a peelable film comprising:

(a) preparing a homogeneous blend containing from 10-90 wt. % of a metallocene catalyzed ethylene polymer and from 10-90 wt. % of a styrene-butadiene block copolymer having from 5-40 wt. % of 1,3-butadiene monomer units and from 60-95 wt. % styrene monomer units, wherein either the metallocene catalyzed ethylene

polymer or the styrene-butadiene block copolymer are present in the blend in an amount of greater than 50 wt.%; and

(b) conforming said blend in the configuration of a peelable film

27. The process of claim 26 wherein said film is prepared by casting, blowing or extruding said homogenous blend in the form of a film.

28. The composition of claim 8, wherein the metallocene catalyzed ethylene polymer and the styrene-butadiene block copolymer are present in the composition in an amount of 50 wt.%.

Appendix B

Evidence

Not Applicable

Appendix C
Related Proceedings

Not Applicable